$$\begin{pmatrix}
b(x) & xb(x) & \cdots & x^{n-1}b(x) & c(x) & xc(x) & \dots & x^{m-1}c(x) \\
b_1 & b_0 & & & c_1 & c_0 & & \\
\vdots & b_1 & \ddots & & \vdots & c_1 & \ddots & \\
\vdots & \ddots & \ddots & b_0 & \vdots & \ddots & \ddots & c_0 \\
b_m & \ddots & \ddots & b_1 & c_n & \ddots & \ddots & c_1 \\
 & b_m & \ddots & \vdots & & c_n & \ddots & \vdots \\
 & & \ddots & \vdots & & & \ddots & \vdots \\
 & & & b_m & & & & c_n
\end{pmatrix}$$

$$\begin{pmatrix}
b(x) & xb(x) & \cdots & x^{n-1}b(x) & c(x) & xc(x) & \dots & x^{m-1}c(x) \\
b_1 & b_0 & & & c_1 & c_0 & & \\
\vdots & b_1 & & & \vdots & c_1 & & \\
\vdots & & & b_0 & \vdots & & & c_0 \\
b_m & & & b_1 & c_n & & & c_1 \\
 & b_m & & \vdots & & c_n & & \vdots \\
 & & & \vdots & & & & \vdots \\
 & & & b_m & & & & c_n
\end{pmatrix}$$